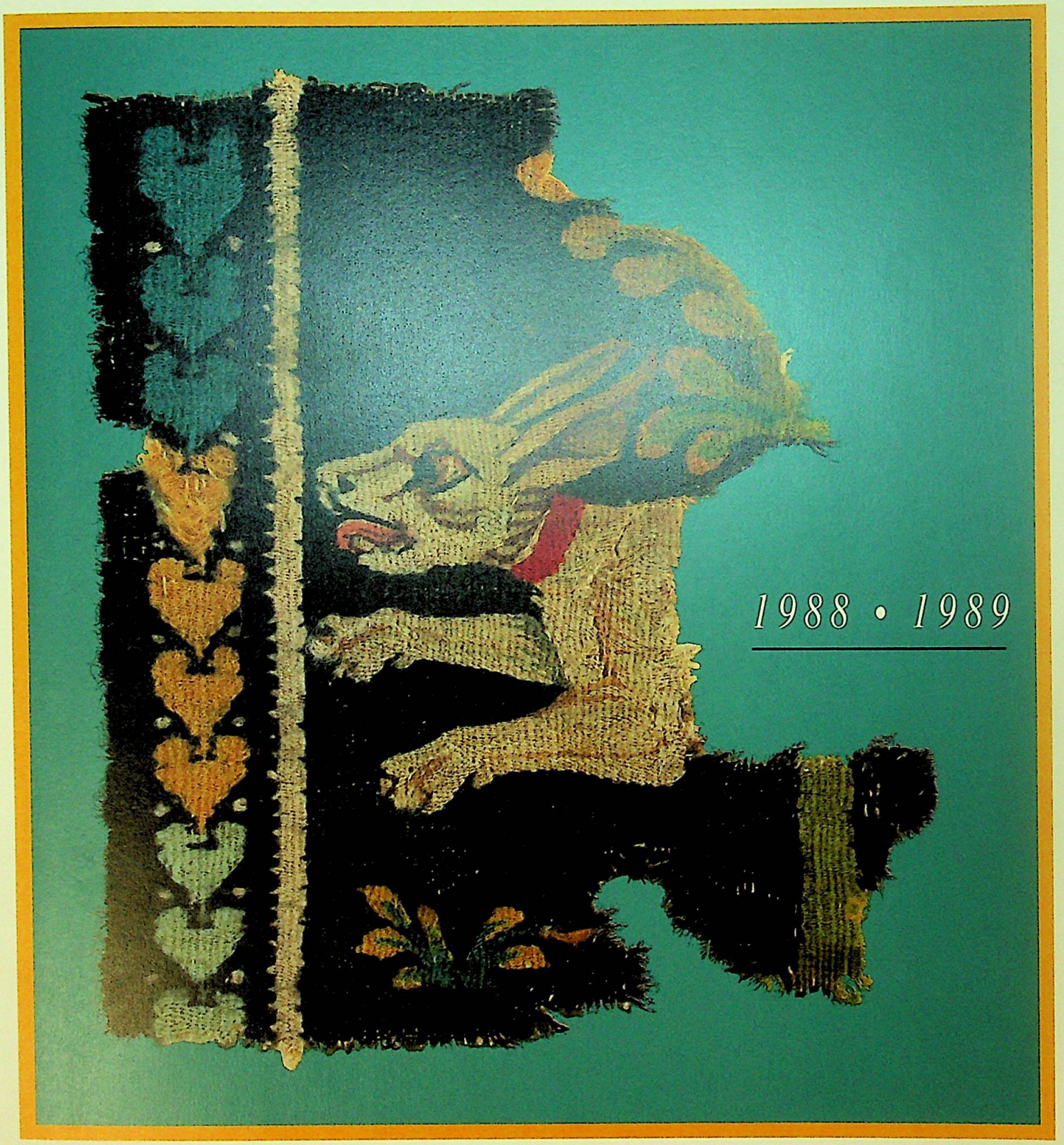
THE TEXTILE MUSEUM

JOURNAL



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Note to Contributors:

In 1962 the Museum initiated *The Textile Museum Journal* to foster research and publication on the history of textile arts. Emphasis is placed primarily upon research relating to textiles from the geographic areas represented in the Museum's collections: the Near East, Central, South, and Southeast Asia, and South and Central America. The journal provides a forum for original research on the artistic and technical aspects of textiles in their historic and cultural contexts.

The Textile Museum Journal invites submission of original articles that fall within its aims and scope. Manuscripts should be twenty to forty-five double-spaced typed pages and be accompanied by an abstract and cover sheet with title and short autobiographical statement.

Authors must follow the most recent edition of the *Chicago Manual of Style* (currently 13th ed.). Authors may submit no more than twenty good-quality 4 x 5 or 8 x 10 black-and-white glossy photographs, including camera-ready artwork. All illustrative material must be accompanied by a separately typed sheet of figure captions.

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Cover Photography: Raymond Schwartz

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The Textile Museum

The Textile Museum is dedicated to furthering the understanding of mankind's creative achievements in the textile arts. As a museum, it is committed to its role as a center of excellence in the scholarly research, conservation, interpretation, and exhibition of textiles, with particular concern for the artistic, technical, and cultural significance of its collections. The mission is pursued through development and maintenance of collections, records, and a library, as well as through scholarly research, exhibitions, publications, and educational programs.

The Museum is open free of charge Tuesdays through Saturdays 10:00 a.m.-5:00 p.m. and Sundays 1:00 p.m.-5:00 p.m. Closed Mondays and legal holidays.

The Arthur D. Jenkins Library is open to the public Wednesdays through Fridays 10:00 a.m.-5:00 p.m. and Saturdays 10:00 a.m.-2:00 p.m.

In Memoriam: Arthur D. Jenkins, 1897-1988

Arthur D. Jenkins, as pictured here by portraitist Robert Templeton in 1976, is surrounded by evidence of his two passions: books and Oriental rugs. Arthur D. Jenkins was an energetic collector, connoisseur, and bibliophile. A collector, he avidly pursued rugs, learning as he went along about prized rugs, neglected rugs, and the perceived differences between them. A connoisseur, he was determined to buy only the finest specimens with a view to presenting his collection to The Textile Museum. A bibliophile, he sought out rare volumes on Oriental carpets and proudly claimed that with every rug he bought a book, and with every book, a rug.

A strong civic leader in Mascoutah, Illinois, newspaperman and publisher, and president and owner of Jenkins Publishing Company, Mr. Jenkins served on The Textile Museum Board of Trustees for 19 years and as its President from 1980 through 1983. His legacy to the Museum rests both in his energetic leadership and in the magnificent collection of over 250 rugs and nomadic trappings that he presented to the Museum by gift and bequest. His personal library, which he presented to The Textile Museum in 1962, numbered over 850 volumes and comprised, at that time, some 80% of the total of rug books known to have been published since 1870. The Arthur D. Jenkins Library at The Textile Museum now houses over 13,000 volumes and is the most comprehensive textile study center of its kind in the country.

Arthur D. Jenkins was adventurous, a risk taker. His friend and colleague Russell Pickering notes, "Whether buying a bankrupt country newspaper in the Depression, founding a printing business to serve a new industry, reconstructing a historical site (Fort Meigs, Ohio) before such things became popular, building a major library on textiles and carpets when few cared, leading a museum from obscurity to the state of the art, or drawing together one of America's greatest Islamic rug collections from areas and types which were unpopular even among the few existing collectors of the day, Arthur D. Jenkins almost never, ever, sided with the majority. Which is undoubtedly a fundamental reason for the successes he enjoyed throughout his long and productive life."

Arthur Jenkins was a pioneer. His legacy to The Textile Museum is enduring. His leadership continues to inspire and focus the Museum's institutional energy.

Ursula Eland McCracken
Director

Figure 1. ***Ragidup*** *from Silindung with ikatted center field.*

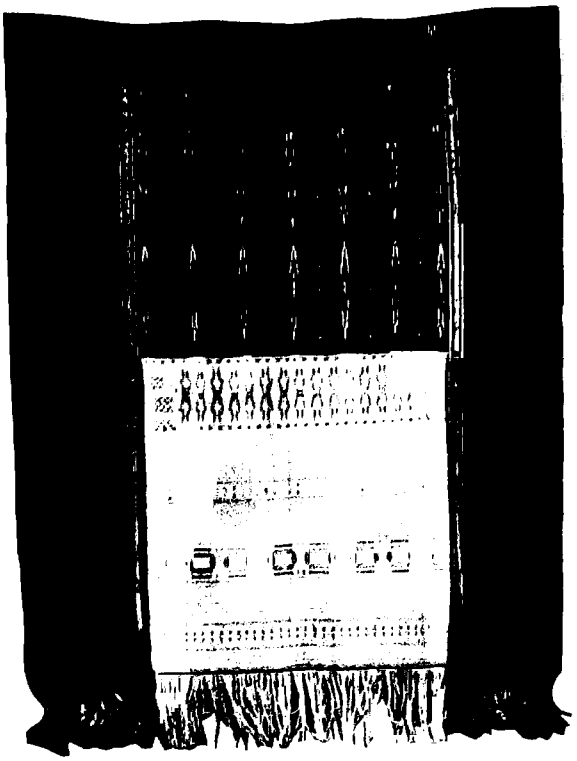
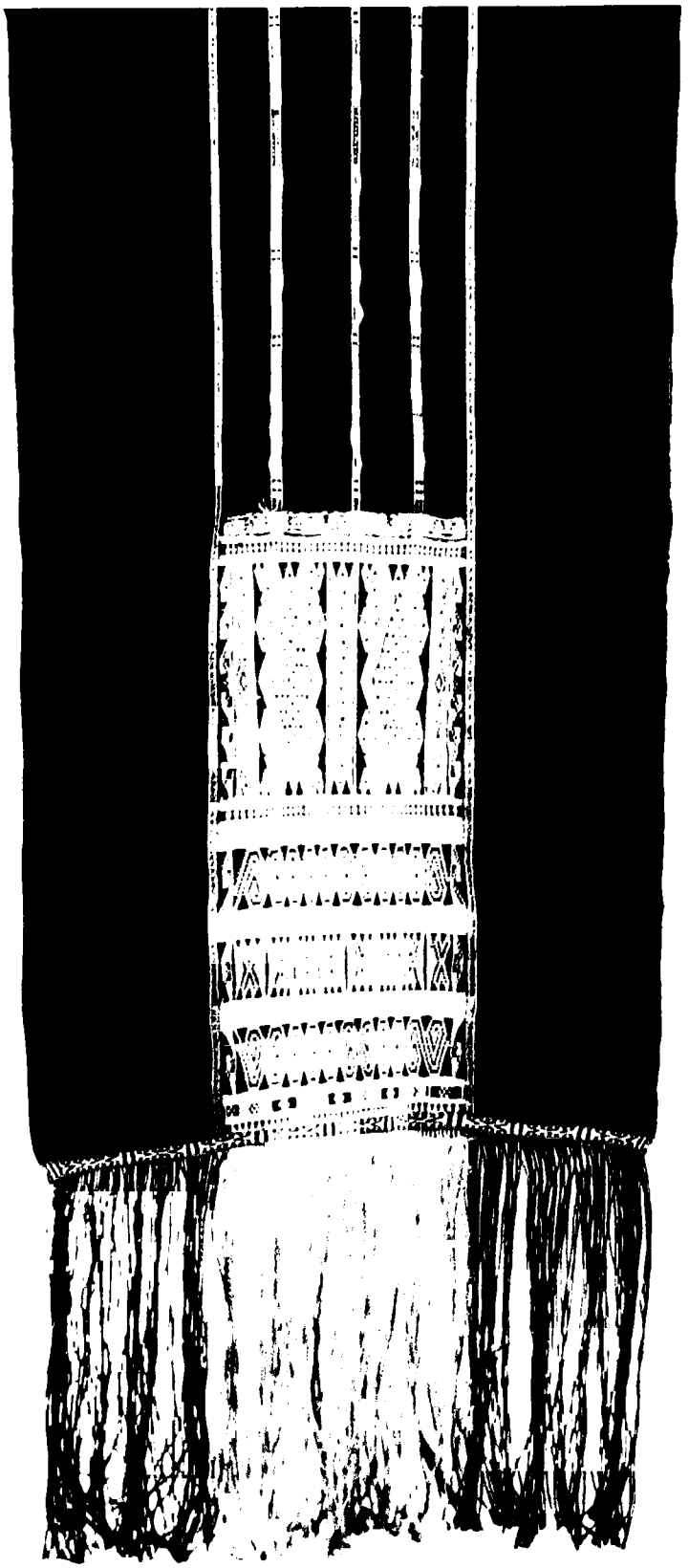


Figure 2. ***Bulang*** *from Simalungun.*



Exchanging Warp in the Batak Ragidup and Bulang

by Sandra A. Niessen

The most spectacular cloth produced by Toba Batak weavers in North Sumatra, locally called the *ragidup*, incorporates a rather unusual weaving technique whereby the warps of the central panel of the cloth are extended with warp of another color. The technique was first described in Dutch (Jasper and Pirngadie 1912) and more recently in English (Gittinger 1975). Warp exchange, as it is practiced by the Batak, is sufficiently intriguing to merit yet another discussion. In this article I will compare the Toba Batak technique of **warp extension** with the Simalungun Batak technique of **warp substitution**. The Simalungun Batak, easterly neighbors of the Toba, weave a cloth called the *bulang* which has many features in common with the *ragidup*, including a change of color in the end fields of the center panel *(Figs. 1 and 2)*. Simalungun weavers do not practice the same technique, but rather a variant thereof, to accomplish the color change. To my knowledge, the Simalungun technique of warp substitution has not yet been described in the literature.[1]

Utilizing Gittinger's description of the Toba technique, but not having access to information about the Simalungun technique, Dorothy Burnham has typologized the exchange of warp in the Toba Batak *ragidup* as "warp substitution": "The exchange of warp ends where a colour change is desired in either the ground or the pattern motifs...." (Burnham 1980:176). I would suggest that the term "warp substitution" is more apt for the technique practiced by the Simalungun Batak on their *bulang*, while "warp extension" would be a more appropriate term to describe the *ragidup* technique. In the case of the *bulang*, the center panel is initially warped to its full length. Approximately half-way through the weaving of the cloth, the as-yet unwoven warps of the center panel are "substituted" with yarn of a different color, and the initial warps are cut off. In the case of the *ragidup*, the center panel is initially warped with warp ends that are approximately only half the length of the finished textile. After the weaver has finished weaving them, she "extends" them to the correct length of the finished textile using yarn of a different color.

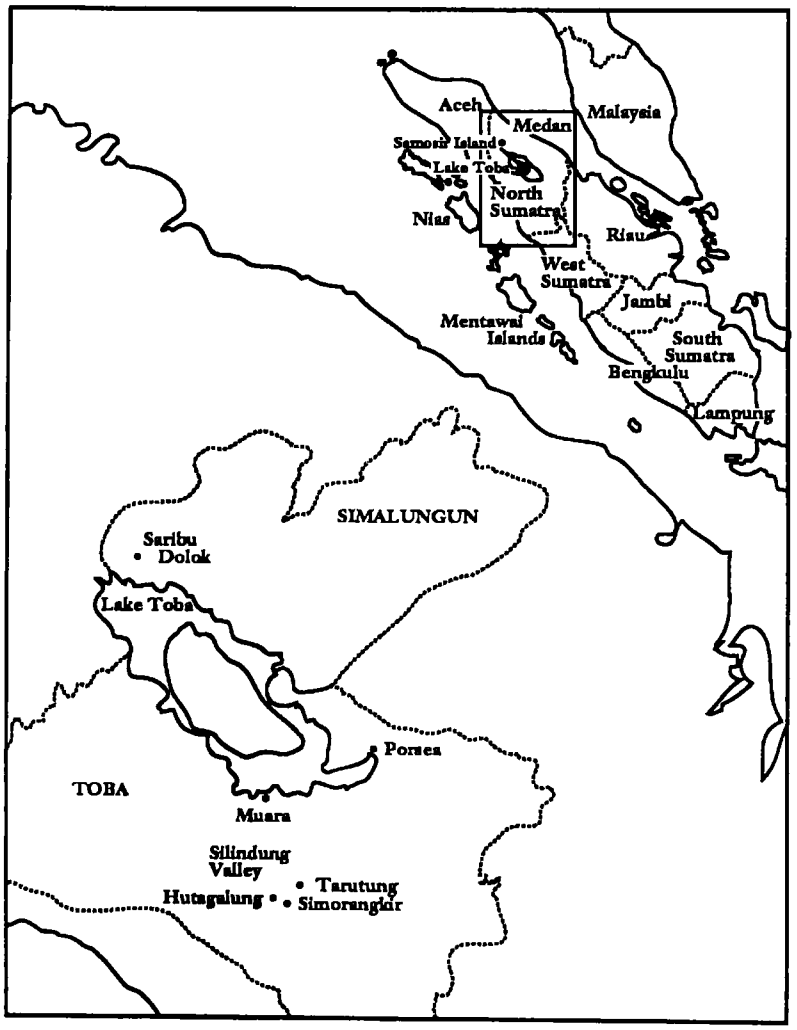
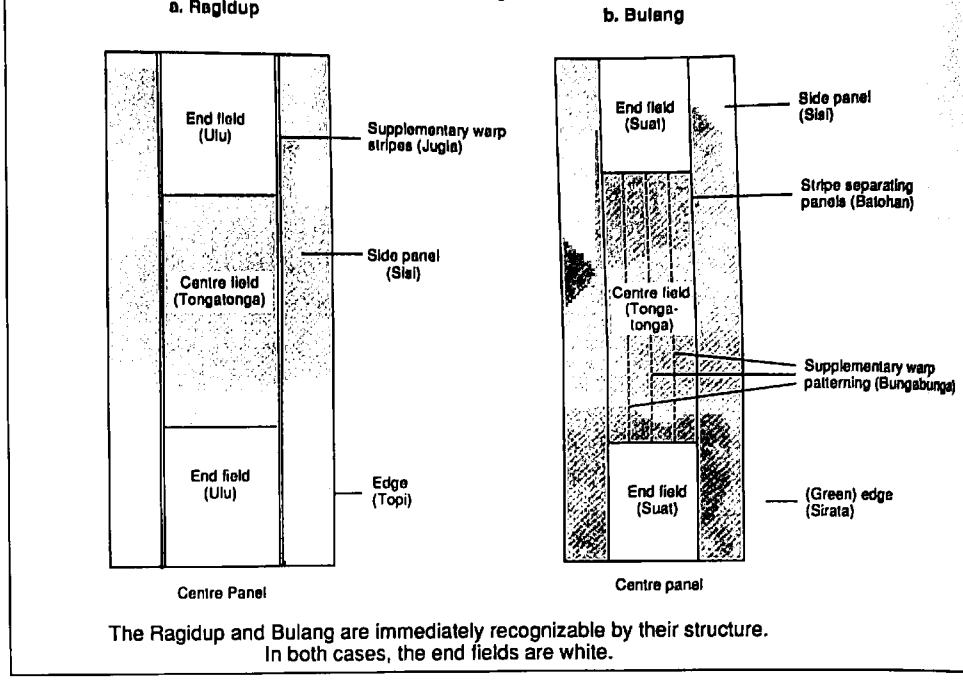


Figure 3. North Sumatra, showing the location of the Batak sub-groups and where the ***ragidup***, ***pinunsaan***, *and* ***bulang*** *are woven.*

The Toba and Simalungun are situated to the south and east, respectively, of Lake Toba *(Fig. 3)*. They are rice-agriculturalists and inhabit similar mountainous terrain. Today, as in the past, they are prolific weavers–especially the Toba. The products of their looms, called *ulos* in Toba and *hiou* in Simalungun, may be read as a metaphor for the relatedness of these two sub-groups. Both produce cloths which are characteristically Batak in design, but each sub-group has its own distinct repertoire of cloths, with only the occasional overlap. Similarly, the two sub-groups are related by a common substratum of cultural tradition which immediately identifies them as Batak, a commonality bolstered by generations of trading and intermarriage. Their respective dialects are mutually unintelligible, however, and detailed inspection of the two cultural traditions reveals their respective cultural uniqueness.

I believe that cloth may be investigated as a measure of cultural correspondence and variety more generally throughout Indonesia. The textile literature suggests that there are commonalities in weaving technique throughout the Indonesian archipelago. The enormous variety within this commonality, however, makes it impossible to speak other than superficially of "Indonesian weaving techniques." The description of the two related, but different, techniques by which the Batak exchange warps will, it is hoped, demonstrate the value of detailed comparisons of weaving techniques within Indonesia. Such studies will not only bring to light the versatility of the looms and the creative ingenuity of Indonesian weavers, but may also permit us to trace undocumented historical ties between groups (Bird 1960). It must be noted, however, that the particular technique that I am discussing here appears to be unique to the Batak (Gittinger 1975; Burnham 1980).



The Ragidup and Bulang are immediately recognizable by their structure. In both cases, the end fields are white.

Figure 4. The tripartite design of Batak textiles.

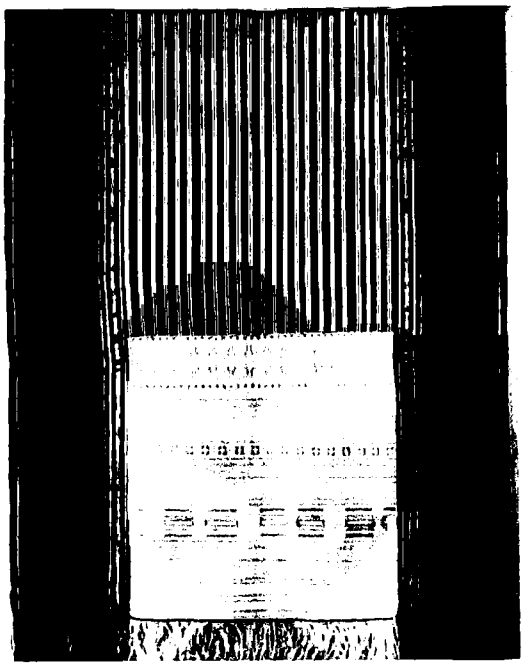


*Figure 5. **Ragidup** with striped center field.*

The *Ragidup* and the *Bulang*

Batak textiles which contain this unusual technique of warp exchange, whether it be extension or substitution, are readily recognizable. Like all other Batak textiles, they are tripartite in design, being composed of two identical side panels and a central panel which bears most of the design elements. They are unlike other Batak textiles, however, in that the center panel is tripartite in design. They may be recognized at a glance by the white end fields in the center panel, elaborately decorated with supplementary weft patterning, in sharp contrast to the darker center field of the center panel *(Fig. 4)*.

Toba Variants of the Cloth

There are numerous Toba Batak variants of this cloth currently being made, and if one looks at the Toba cloth repertoire of the past hundred years, this number expands considerably.

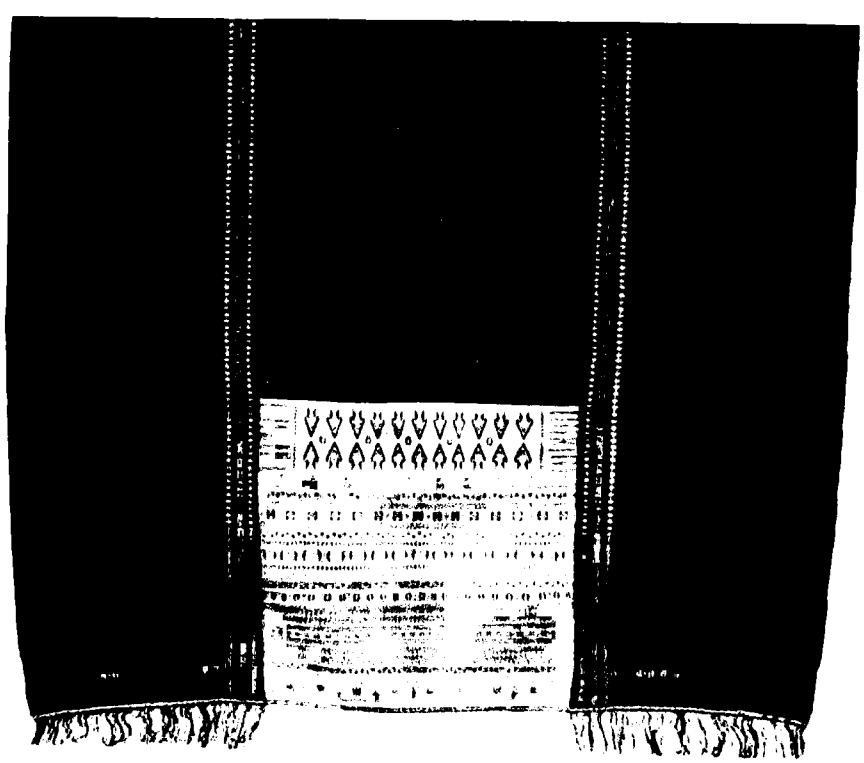
1. The *ragidup* has claimed the most attention of any Batak cloth in the literature. The most sophisticated version of the cloth is made in the Silindung Valley close to the town of Tarutung *(Fig. 3)*. Each of the villages of the Silindung Valley specializes in its own particular cloth type. For as long as local memory serves, the village of Hutagalung has been making the *ragidup*. A slightly inferior variant is made in the neighboring village of Simorangkir. The skill with which the cloth is constructed there is noticeably less and the cloth is marketed at a lower price. The least spectacular *ragidup* is produced in Muara, on the edge of Lake Toba, which has always had strong trade links with the Silindung Valley. It is especially the poor-quality supplementary weft patterning which marks the *ragidup* from Muara as an inferior cloth.

Gittinger discussed the Hutagalung variant of this cloth in her article (1975), and I focus on this variant here as well. The Hutagalung *ragidup* has not remained unchanged through time. As little as one generation ago, all the *ragidup* from Hutagalung were characterized by the maroon color of the center field, with regularly spaced white and indigo stripes (*honda*) *(Fig. 5)*. Today's fashion dictates that the *ragidup* have a dark blue center field embellished with regular red and white ikat stripes *(Fig. 1)*.

2. Another major variant of the *ragidup* is made in the Porsea region southeast of Lake Toba. Here the cloth is called a *pinunsaan*. It is a cloth with a great deal of integrity and much more variety in the center field of the center panel than is found in the *ragidup*. What particularly characterizes this cloth is the boldness of the supplementary weft patterning in the end fields of the cloth, and the fact that the end field is *sewn onto* the center field *(Fig. 6)*. Neither warp extension nor warp substitution is practiced here. There is even a division of labor between weavers specialized in weaving the ikatted center field and those specialized in weaving the end fields with the supplementary weft. Very often it is the vendor in the market who sews the sections together with a sewing machine to assemble the complete cloth. In the older museum cloths of this type, the end panels were stitched in by hand.

It is a mistake to assume that this variant is inferior to, or of more recent invention than, the *ragidup* simply because the end fields are not woven in using the more complicated technique of warp exchange (see e.g. Barbier 1983). On the evidence of the construction of older cloths in museum collections, and the fact that none of the Porsea weavers could recall a time when warp extension

Figure 6. ***Pinunsaan*** *from the Porsea region, showing the large, bold supplementary weft patterning in the end fields.*



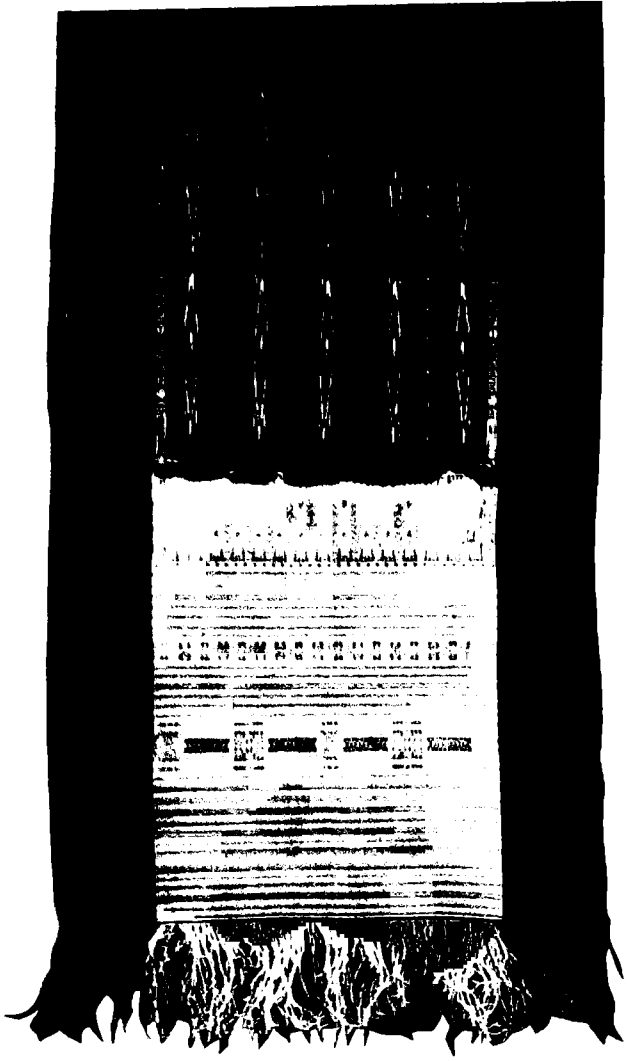


*Figure 7. **Ragidup sisabulung** from Silindung.*

was a technique they practiced, it seems that warp extension was not known in the Porsea region. The *pinunsaan* is merely an instance of the wide range of Batak weaving techniques used to accomplish the same goal. It is one more variant on the same technical theme.

3. A final Toba variant, called the *ragidup sisabulung*, also originating from Hutagalung, is very rare *(Fig. 7)*. It does not appear in any European museum collection of Batak cloth, nor in the literature on this textile tradition. The suffix to its name indicates that this *ragidup* is woven as a single piece of cloth. It contrasts, therefore, with the other variants which have side panels woven separately and sewn onto the center panel. Because the side panels of the *ragidup sisabulung* are woven simultaneously with the center panel, when the warp in this cloth is extended, it is extended across the entire cloth including both side panels. While I did not see it done, I assume that the same technique was used to extend the warp of this cloth as is used for the regular *ragidup*.

The cloth, difficult to execute, is made only on commission, and does not figure as a ritual cloth, unlike the "real" *ragidup*, which ranks as the highest ritual cloth. Because it is so rare, however, it sells at a higher price.

Simalungun Variant of the Cloth

The *bulang*, or headcloth, is the only Simalungun variant of the cloth under discussion. Unlike the Toba variants which are worn over the shoulders or around the hips, the smaller dimensions of the *bulang* make it appropriate for its function as a headdress, the manner in which it is tied indicating the occasion and the status of its wearer *(Fig. 8)*. [2]

The weavers who specialize in the *bulang* are found in the villages of Pagar Batu Si Talas Ari, Negori Tonga, and Simpang Naga Panei, just off the main road to Saribu Dolok, heading west toward Lake Toba *(see Fig. 3)*. As in the case of the *ragidup sisabulung*, this entire

*Figure 8. The **bulang** as it is worn in Negori Tonga.*

cloth is warped and woven as a single unit. In contrast to the weavers of the *ragidup sisabulung*, however, Simalungun weavers substitute the warp of the center panel without affecting the side panels.

Warp Extension and Warp Substitution Compared

All Batak textiles are woven on a backstrap loom. The loom is virtually the same in the Toba and Simalungun regions and varies in only minor ways which are not germane to this discussion. The loom takes a continuous, circular warp, the heddles of which are inserted during warping. As she weaves, and the web grows, the weaver shifts the warp in the loom until she finishes off almost where her weaving began. There is a space left only for the manipulations of her heddle rod, shed stick, and sword. The cloth is removed from the loom when that short length of unwoven warps is cut and the heddle rod and shed stick are extricated from the dangling warps. The cloth then opens out to the oblong shape which we are accustomed to in these cloths. The dangling warp ends are twisted to make a fringe.

When warps are exchanged in these cloths, the procedure occurs while the cloth is still in the loom, before the original warps are cut. The original set of heddles is used for the new warp. The following account documents, step by step, the methods the Bataks employ to exchange warps. The first description is of warp extension in the Toba Batak *ragidup*. It is followed by a description of warp substitution in the Simalungun *bulang*.

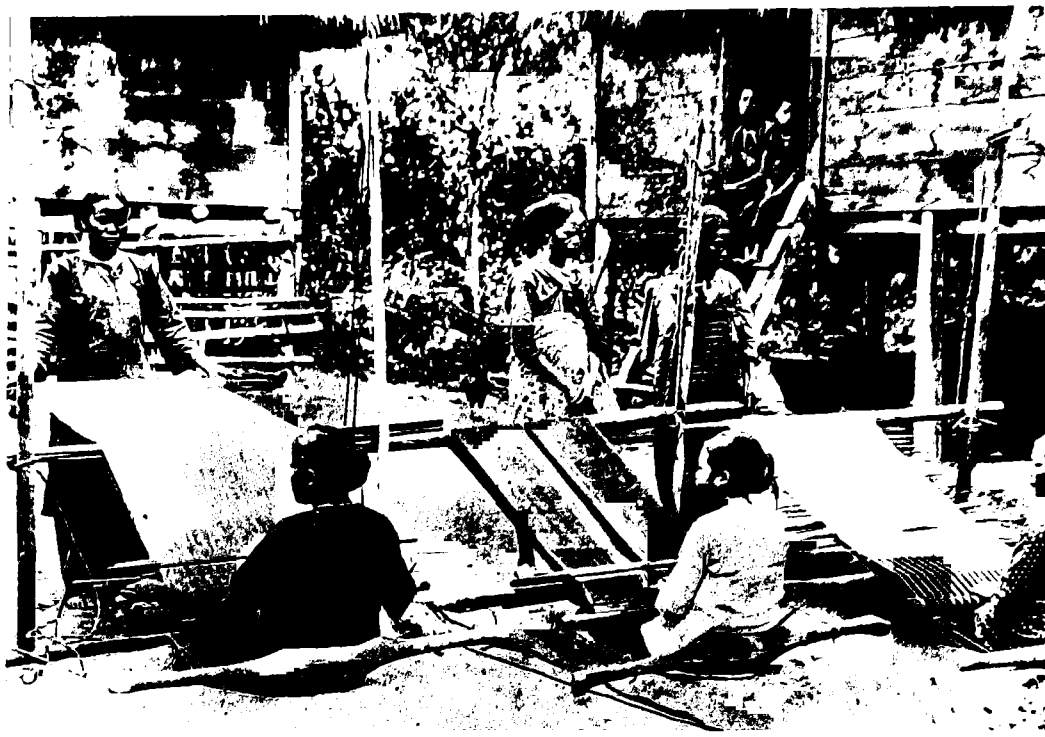
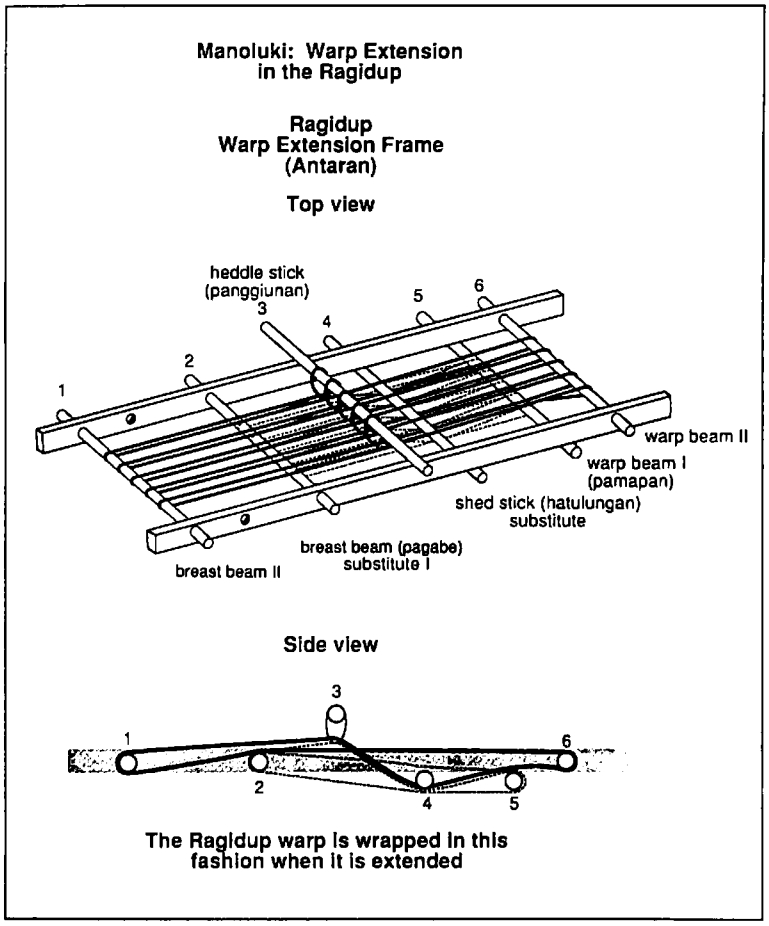


Figure 9. A photograph from the early decades of this century showing the different stages in weaving the ***ragidup****. The photograph is in the possession of the Rijksmuseum voor Volkenkunde in Leiden, The Netherlands, no. 551-kk 32.*

Figure 10. Transferring the ***ragidup*** *loom to the warp extension frame.*



The Toba Batak Technique on the *Ragidup*: Warp Extension (*Manoluki*)

I saw this executed by Nai Ratna Siagian and her daughters several times in 1986 when I was living in Hutagalung. The procedure was as follows:

1. The center panel of the *ragidup* was initially warped the length of the center field only. This was woven entirely, but the finished web was left in the loom in readiness for warp extension. [The side panels were warped the length of the entire cloth and woven separately from the center panel on a different loom *(see the center weaver in Fig. 9)*]. Supplementary warp was woven only in the side panels.

2. Upon completion of the center field, a warp extension frame, called an *antaran*, was set up indoors and the loom containing the center panel was transferred to it *(Fig. 10)*. The one Nai Ratna's daughters used was set at approximately a 45 degree angle, bound to uprights at one end, and supported by a chair at the other end. This allowed the weavers to stand up at their work.

To prepare the loom for the warp extension frame, the warp beam of the loom was replaced with a stick of narrower diameter and the shed stick was replaced with a smooth, flat bamboo rod (*baliga*). This warp extension frame differed from the one depicted by Gittinger in that only cross-bars 1, 2, and 6 were inserted in the frame *(compare with Gittinger 1975:14, fig. 2)*.

3. Two weavers worked together at exchanging the white warp for the colored warp. They stood at either side of the frame and worked from the middle towards the outside. Because it fixed the position of beams 1 and 6 *(see Fig. 10)*, the frame functioned to dictate the exact length of the new warp. Nai Ratna's daughters were very proficient and needed less than one hour to finish the job.

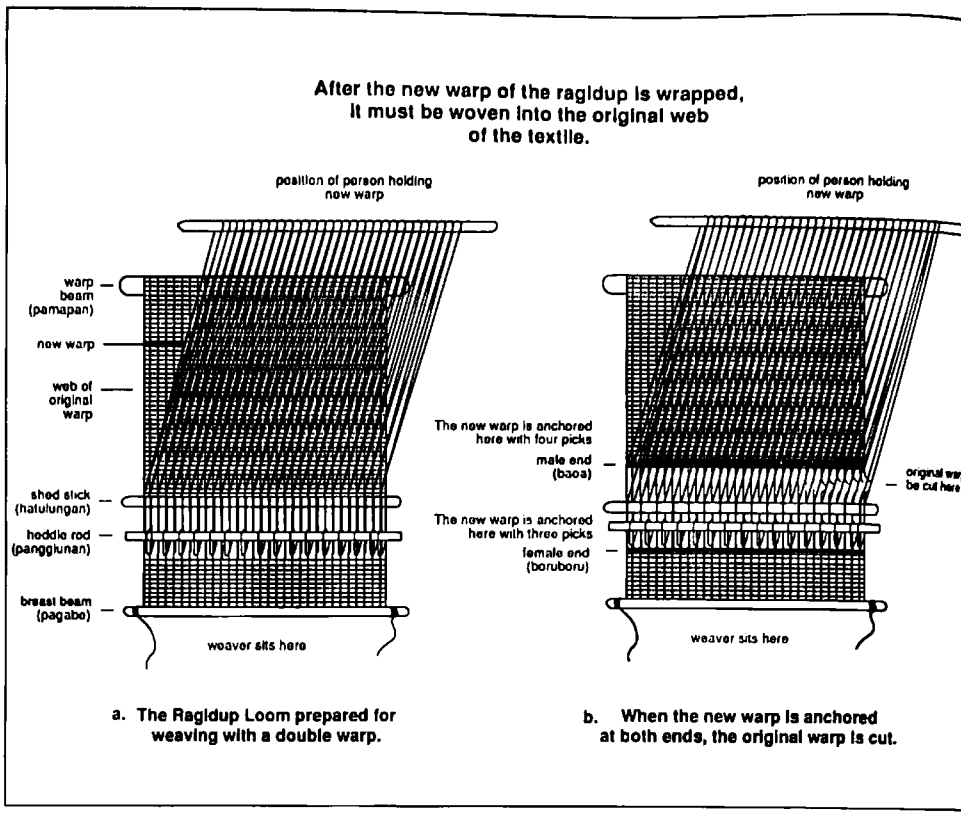

After the new warp of the ragidup is wrapped, it must be woven into the original web of the textile.
position of person holding new warp
warp beam (pamapan)
new warp
web of original warp
shed stick (halulungan)
heddle rod (panggiunan)
breast beam (pagabe)
weaver sits here
a. The Ragidup Loom prepared for weaving with a double warp.
position of person holding new warp
The new warp is anchored here with four picks
male end (baoa)
The new warp is anchored here with three picks
female end (boruboru)
weaver sits here
b. When the new warp is anchored at both ends, the original warp is cut.

Figure 11. How the new warps of the ***ragidup*** *and the* ***bulang*** *are wrapped.*

The wrapping of the new warp essentially replicated the passage of the original warp, to correctly incorporate the essential parts of the loom. A spool of fine cotton yarn was passed *(Fig. 10)*:

from the warp beam -
- over the shed stick
- between the heddles
- around the breast beam

from below

from the breast beam -
- through the heddles
- under the shed stick/*balobas*
- around the warp beam

from below

4. The loom was then removed from the frame and prepared for weaving with the double warp. The new warp had first to be anchored against the cloth web. To do this, the original breast beam was reinstalled, as well as the sword and shed stick. The new warp was taken off one of the cross-bars (1 or 6), rolled up on the other, and laid atop the loom.

5. Nai Ratna unrolled the new warp when the loom was ready for weaving and one of her daughters held it, using the cross-bar, to supply the

same tension as a warp beam normally would supply, and which was supplied by the two cross-bars *(1 & 6 in Fig. 10)* while the yarn was being warped. The tension on the original warp was, as before, supplied by breast beam and warp beam *(see the weaver and her assistant at the left in Fig. 9; see also Fig. 11a and b).*

6. Nai Ratna could then begin to weave both warps simultaneously. She anchored the new warp against one end of the already-woven center field using a wooden weft of narrow diameter. Its rigidity was essential to hold the new white warp firmly against the textile web. Then she threw a double weft of white yarn, each of the same weight as the white warp, to replace the wooden weft, and the wooden weft was extricated. Three more picks were then thrown to yield a total of four picks to anchor the new warp *(the weaver on the left in Fig. 9 is anchoring one end of the new warp).* The end field, which was anchored with four picks, was later decorated with the supplementary weft patterns which the Batak say characterize the "male" end of the cloth *(Fig. 1).*

7. The other end of the new warp had then to be anchored to the other end of the center field. Therefore Nai Ratna had to turn her loom around as follows: Her daughter rolled up the new warp and rested it atop the loom. She untied the warp beam and the backstrap and flipped the loom face down. Then she retied the warp beam, shifted the original warp to the appropriate position in the loom, and moved the shed stick behind the heddles. The backstrap was retied and Nai Ratna could begin weaving again, at the new location.

8. Her daughter again unrolled the new warp and gave it the necessary tension. Again the first weft was a narrow wooden rod, which was subsequently replaced with cotton weft when the warp was firmly in place. This time only three picks of weft were thrown to anchor the warp. This end of the cloth was destined to be embellished with the "female" supplementary weft patterns *(Fig. 5).* Every *ragidup* has one female end field and one male end field.

9. Nai Ratna had now firmly anchored the new warp to the textile web at both ends, and the unwoven part of the original warp could be cut. The shed stick was relocated in the new warp only. The old warp was then unceremoniously cut down the middle *(Fig. 11b)* and extricated from the heddles. At this point, the length of the loom increased by absorbing the slack of the new warp. By now the services of the assistant were made redundant by the warp beam. *(The weaver on the right in Fig. 9 is at this stage. Note how much longer her loom is than that of the weaver on the left, because it has absorbed the length of the new warp.)*

10. Nai Ratna continued to weave on the "female" end of the cloth until the first major supplementary weft pattern row, the female "human pattern" (*pinarhalak*), was completed. *(The pattern rods for the supplementary weft patterning are depicted in the right-hand loom in Fig.*

Figure 12. A photograph from the early decades of this century depicting the warp extension frame of the ***ragidup****. The weaver has finished with the frame, has anchored both ends of the new warp, and has cut the original warp. She is now beginning to weave one of the end panels of the cloth. The photograph is in the possession of the Vereinigte Evangelische Mission in Wuppertal, West Germany, no. SW 5000-23.*

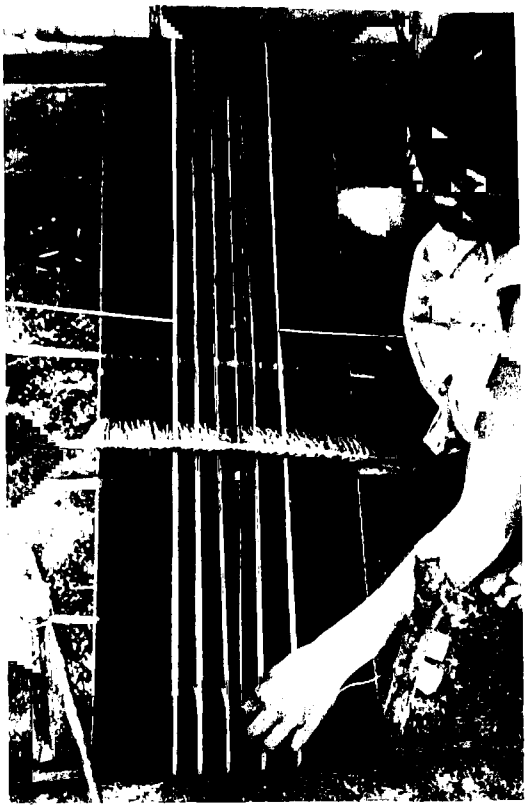


Figure 13. Mamak Si Dirita is preparing to substitute the warps of the center panel of her ***bulang****. She has substituted the cloth and warp beams in her loom with round rods, and the sword and shed stick with flat rods. She has pounded four posts into the ground to accommodate her loom so that there is tension on the warp.*

Figure 14. With a piece of white yarn, she measures the precise length of the unwoven warp (that is, she gauges the length of her new warp).

9. The weaver in Fig. 12 is at the same stage in her weaving. This photograph also depicts the warp extension frame from which she has just removed her loom.) She then flipped her loom once again, and shifted the circular warp to the correct position, to weave the male variant of the "human pattern." This was Nai Ratna's exclusive part in the division of labor. Weaving the supplementary weft patterning is a difficult operation and she felt it required her experience and expertise.

11. The male end field was then woven until completion, the loom was flipped for the last time, and finally the female end of the cloth was also woven to completion. The remaining unwoven white warp between the two completed end fields was cut and twisted to result in the dangling white fringe. The still-dangling ends of the original warp were trimmed close to the textile web *(see Figs. 7 and 25).*

The Simalungun Technique on the *Bulang*: Warp Substitution (*Manuloki*)

1. In Simalungun, the entire *bulang*, including both side and center panels, is warped at once, and all to the correct length of the finished cloth. Supplementary warp is also warped at this time, so that it falls in the center field of the cloth's center panel *(Fig. 4, right)*. After the center field is woven, the supplementary warps are cut about 1 1/2 inches from the end of the supplementary warp patterning and the dangling

Figure 15. She has wrapped the first white warp end and begins to wrap the second. She is sitting to the right of her textile and wrapping from right to left. The crosswise rods, parallel to the original warp and breast beams, have already been secured.

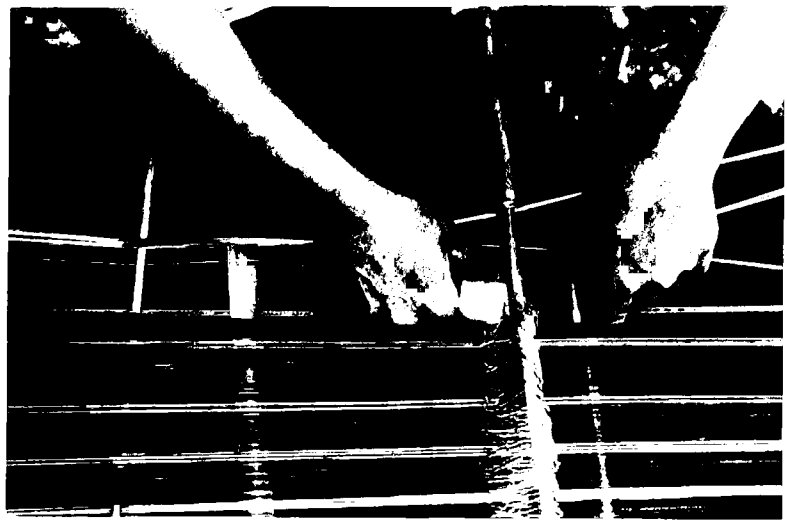


Figure 16. She wraps the new warp between the heddles, having gone over the balobas and under the little stick.

ends are tied off with a knot. This means that when the time comes to substitute the warp of the center panel, only the main warp is involved. I watched boru Purba, the wife of Silalahi, known teknonymically as Mamak Si Dirita (the mother of Dirita) in the village of Naga Panei, do the warp substitutions. Figs. 13-25 show her at this task.

2. When Mamak Si Dirita had woven enough of her textile to finish the red-colored center field of the center panel, she detached the backstrap from her loom and prepared it for substituting the warp of the center panel: the cloth beam and warp beam were substituted with large round sticks, and the sword and shed stick with flat wooden rods (*balobas*). Mamak Si Dirita did not utilize a frame as the Toba do. She moved outside with her loom and hammered four pegs into the ground at a sufficient distance from each other to brace the warp and breast beams of the loom with the warp taut between them *(Fig. 13)*.

3. The weaver's intention at this point was to substitute white warp ends for the unwoven red warp ends in the center panel. The new warps were to be exactly the same length as the unwoven warp ends that they were replacing. To accomplish this, she carefully measured, with yarn as her measuring tape, the unwoven part of the old warp *(Fig. 14)*. She affixed cross-bars to the vertical pegs which she had hammered into the ground, around which the new warp would be wrapped. The placement of the cross-bars was exact to ensure that the new warp would be precisely the same length as the old. She worked alone, sitting to the right of her loom, wrapping from right to left–that is, starting close to herself, and working increasingly farther away *(Figs. 15-16)*. She needed only half an hour to finish wrapping the new warp. In Fig. 17 she is half-finished.

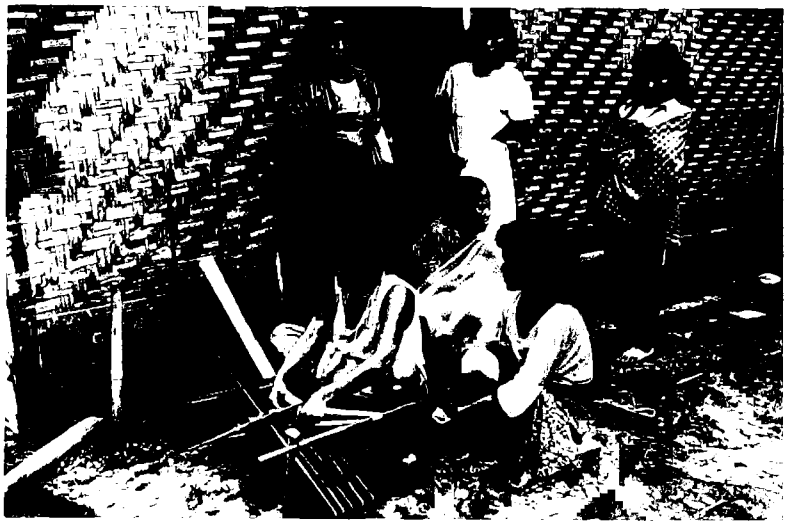


Figure 17. The weaver is half-finished.

Figure 18. When she is finished winding the warp, the weaver returns the warp to the loom. She has retained the cross-bars from the warping process and uses these to apply tension to the new warp. She eventually wraps the string attached to the warp-beam end of the warp around her toes.

The wrapping was done as follows: *(see Fig. 26)*

from the breast beam -
- through the heddles
- under the shed stick substitute
- under the "little rod"
- around the warp beam from below

from the warp beam-
- under the "little rod" (it marks the boundary between side and center panels and separates new warp from old warp)
- over the shed stick substitute
- between the heddles
- under the sword substitute
- around the breast beam from below.

The procedure does not interfere with the unwoven warps of the side-panels of the textiles.

4. Mamak Si Dirita then prepared to return indoors with her loom so that she could again weave, this time with the double warp. She detached the cross-bars from the uprights, retaining both in the warp. Their function would not be completed until the new warp was attached to the textile web.

5. Tension on the original warp was maintained as before by the spacing of the cloth and warp beams. Mamak Si Dirita did not have an assistant to provide tension on the new warp but did it herself in an ingenious fashion. The new warp was still hanging on the two cross-bars; she held one of these bars in her left hand, and attached the other with string to her thumb-toes so that she was able to control the tension herself even while weaving *(Figs. 18-21)*.

6. As with the *ragidup*, the first picks of weft were made in the double warp to anchor the new warp against the web of the cloth. The cross-bar used during warping functioned as the first weft *(Fig. 20)* and was subsequently replaced with a wooden rod of much smaller diameter *(Fig. 21)*. Mamak Si Dirita threw about ten picks using the original red weft, and then switched to white weft for another three picks, beating down firmly each time. When there was no danger of the new warp loosening itself from the web of the textile, the tiny stick holding it in place was extricated. This left a telltale row of small loops of white yarn on the face of the cloth *(Fig. 22)*.

7. Mamak Si Dirita's next task was to anchor the other end of the warp to the other end of the center field. She "flipped" the loom over and repositioned the weaving rods in much the same way as Toba Batak weavers do.

8. Weaving proceeded once again with the double warp. The particular case I was privy to was interesting because the new warp was too short, by a mere centimeter or two, to reach the web of the center field. The weaver solved the problem by introducing a few picks to the original warp to lengthen

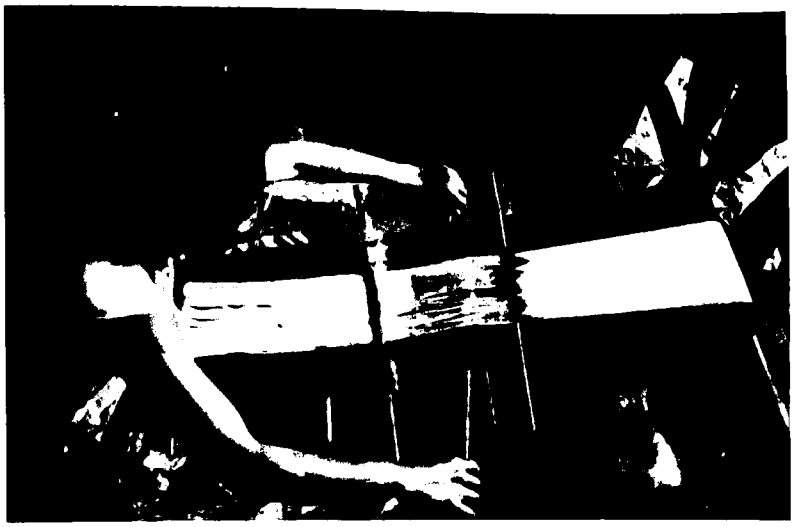
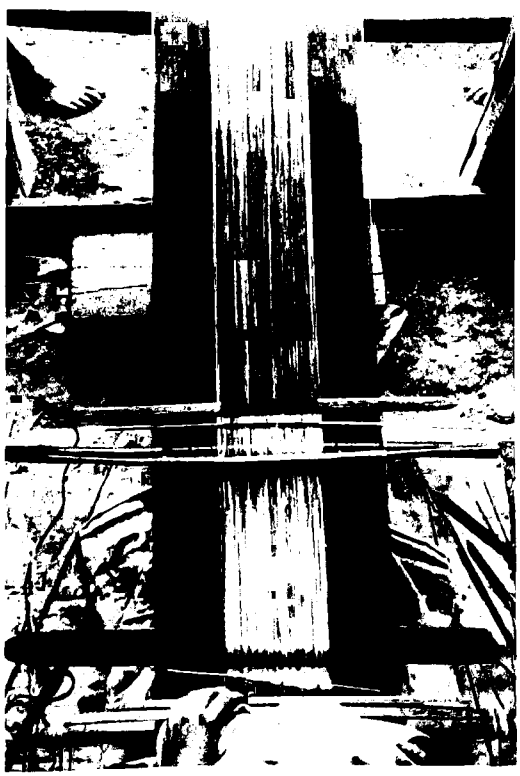


Figure 19. It is just barely possible to see the string wrapped around her toes in this and the succeeding two photographs. She is preparing to weave with the double warp.

Figure 20. The cross-bar is her first "weft," firmly anchoring the new warp to the textile web.

the web. She then re-inserted her weaving equipment to weave with the double warp. Again at this end, a row of white loops marked where the new warp joined the web, and where the first wooden weft of wider diameter than yarn had been extricated *(Fig. 23)*.

9. With the new warp firmly in place, the old warp could be disposed of. The weaver inserted her sword between the red and white warp with the red warp in the upward position. She turned her sword on its edge to maximize the distance between the two sets of warps and then cut the red warp at both ends, close to the web of the center field *(Figs. 24-25)*. Mamak Si Dirita was so impatient at not being able to find her scissors that she eventually used a horrendous large knife to perform the job *(Fig. 25)*. *Bulang* weavers conserve the leftover red yarn. By connecting the severed warps end to end, they are able to produce a yarn that is suitable to use as weft in the next textile. The cost of the yarn relative to the price their cloths will fetch on the market forces the weavers to be conservative with their materials.



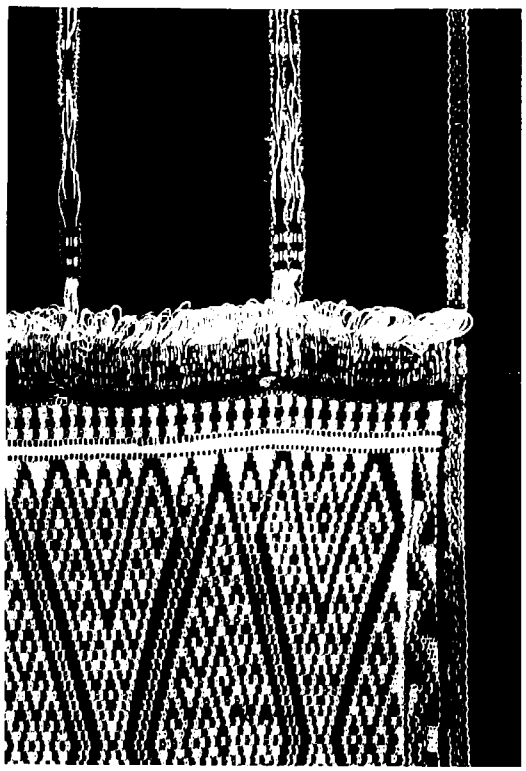


Figure 21. The cross-piece is then substituted with a rod of much smaller diameter so the weft can be beaten closer to the textile web.

Figure 22. Later the smaller rod is also extricated, leaving a row of tiny telltale loops in the cloth.

10. As with the *ragidup*, the two end panels of the *bulang* are embellished with different patterning, and similarly, one end is male (*dalahi*) and one end is female (*daboru*) *(Fig. 27)*. The female end was woven first in the instance that I witnessed. Then the loom was flipped over and the male end was done.

Figure 23. The new warp is affixed to the textile web at the other end of the center field in much the same fashion. This photograph reveals the imperfections in the new warp: it is slightly longer at one side than at the other. This means that when the small rod is extracted, an uneven row of loops will remain.

Figure 24. Preparing to cut the original warp. Note that the sword is stood on its edge to maximize the distance between the old red warp and the new white warp.

Figure 25. Cutting the original red warp. Mamak Si Dirita is using an unwieldy knife for the job.

The Patterns in the End Fields of the *Ragidup* and *Bulang*

In her article about the *ragidup*, Gittinger supplies the names of the different supplementary weft motifs which Jasper had recorded in 1912, and supplements this with her own fieldwork results. However, her illustrations are taken from the *pinunsaan* cloth rather than the Silindung *ragidup* (*Gittinger 1975: 20-21, Fig. 10 a & b*).

The motifs of the *bulang* which bear so much similarity to the motifs of the *pinunsaan* have not yet been discussed in the published literature. I obtained the motif names in Fig. 27 from Ibu Hotlin in Sitalasari and from her very knowledgeable sister who dropped in on us during the interview. Gittinger mentions the disparity in motif names in the Toba region and her evidence of "semi-private mythology" centering on the *ragidup*. Evidence suggests that the same is true in Simalungun. A comparison of museum specimens of the *bulang* reveals that the motifs selected for the end fields are not always the same. Simalungun publications discussing textile patterning (e.g. Purba, n.d.) also put forward variant names for the patterns. However, it seems to be a constant that the motif of the second main pattern row from the top, whatever it is, is repeated below the third main pattern row.

There are significant differences in how the *ragidup* and the *bulang* are woven, due to the simple fact that the Toba cloth has separately-woven side panels while the Simalungun cloth is woven *with* side panels. While the supplementary weft patterning in the *ragidup* can extend from selvedge to selvedge, in the *bulang* it stops at the borders between side and center panels. Indeed, this is a general distinguishing feature of Toba and Simalungun textiles. The Simalungun have developed methods to keep supplementary weft patterning localized in the center panel, while the Toba allow it to run from edge to edge of the cloth, even in those cloths in which side and center panels are woven as a single whole. A case in point is the *ragidup sisabulung*. Not only are the side panels "extended" along with the center panel in this cloth, but the supplementary patterning also extends across the side panels *(Fig. 28)*.

Conclusions

This article has described various Batak textiles with elaborately decorated end fields in the center panel. On the one hand there is the Toba Batak *pinunsaan* textile which utilizes the simple option of weaving the end field separately and sewing it onto the center field of the center panel. On the other hand, there are the Toba and Simalungun textiles which exchange the warp of the center panel, achieving the same result. Of the cloths which exhibit warp exchange, the *ragidup* **extends** the warp of the center panel, and the *bulang* **substitutes** the warps of the center panel. The rare Toba variant called the *ragidup sisabulung* exhibits features of both and of nei-

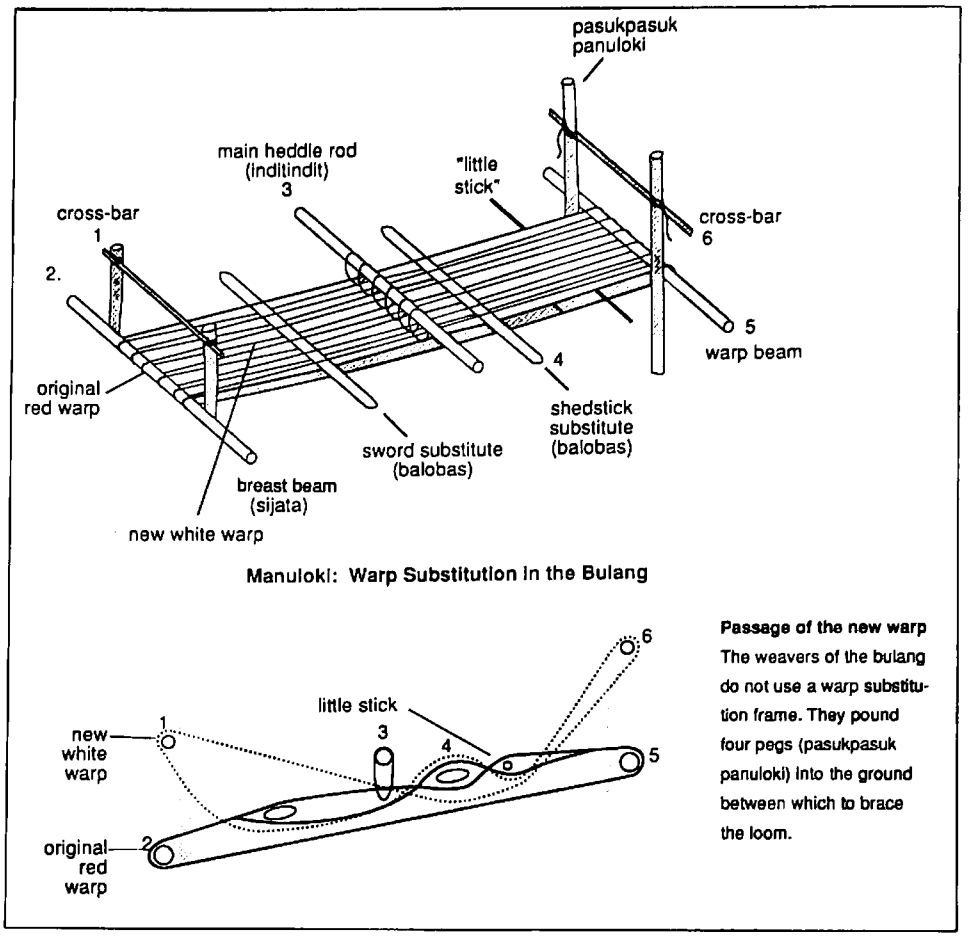


Figure 26. Rolling up the new warp when it is removed from the frame.

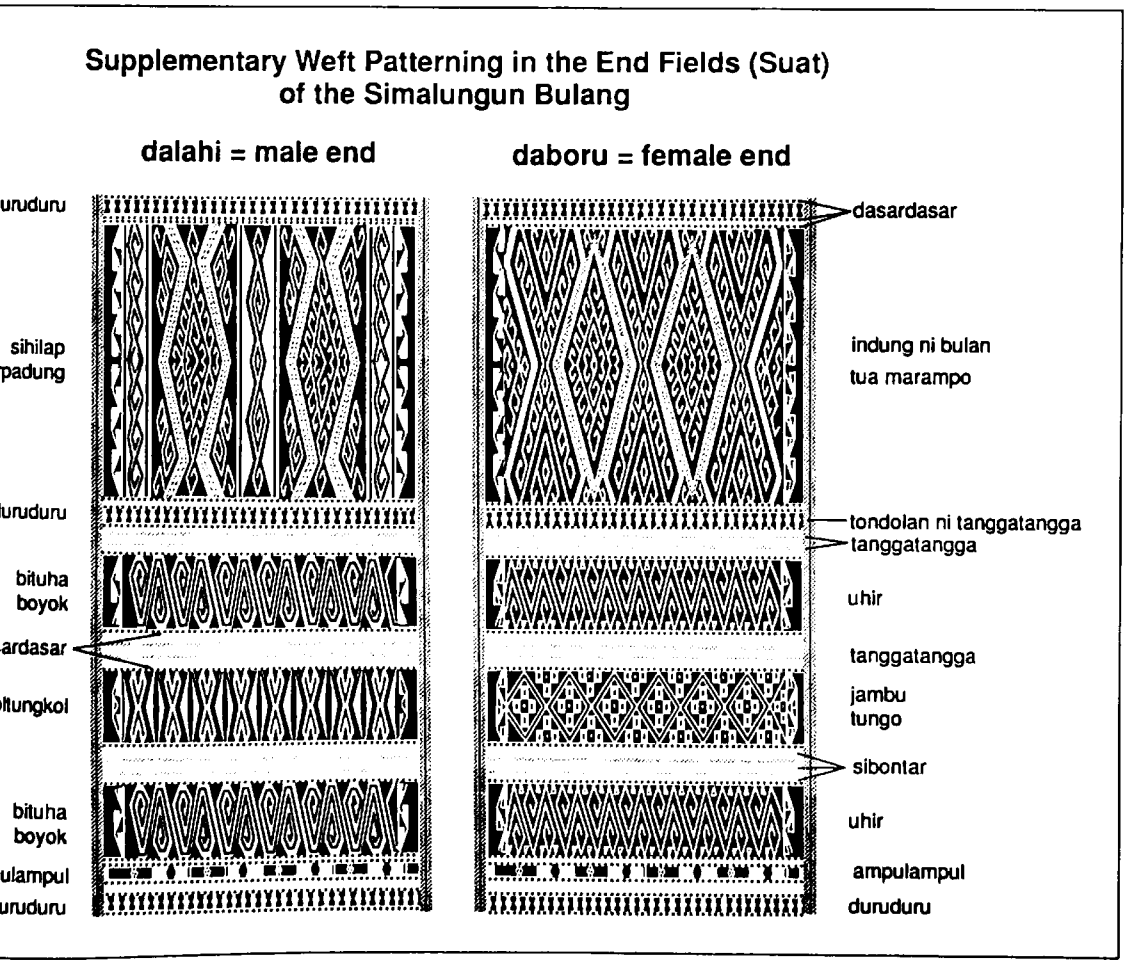


Figure 27. Supplementary weft patterning in the end fields (Suat) of the Simalungun bulang.

ther. Like the regular *ragidup*, the warp ends of the *ragidup sisabulung* are extended rather than substituted. Like the *bulang*, the cloth is woven as a single unit, but unlike both, the side panels are involved in the warp exchange and are decorated with the supplementary weft patterning that is otherwise restricted to the center panel.

I have documented the range of Batak variations in executing these particular cloths in order to:

1. Suggest that the term "warp substitution" is appropriate only for the *bulang*, and that "warp extension" should be used for the technique practiced on the *ragidup*;

2. Clarify that the *pinunsaan* with its sewn-on end fields is not an "inferior" or "modern" variant of the *ragidup*, but rather another creative Batak variation on the same local technical theme;

3. Present an example of how weaving technique can provide a metaphor for the cultural relatedness of ethnic groups.

Dwelling on this third point for a moment, it is clear that the techniques utilized by the Toba Batak and the neighboring Simalungun Batak are appropriate to their respective cloth traditions. This article does not broach the issue of historical antecedence, nor, to my knowledge, does the technical detail reveal whether one cloth or technique originated prior to the other. External information is necessary to reflect further on the historical relationship between the two technical traditions. To be sure, the Simalungun Batak admire the Toba Batak *ragidup* and import the cloth for ritual wear. Today there is still a *ragidup* stored in the Simalungun Museum of Pematang Siantar, taking its place as a piece of Simalungun apparel next to a range of cloths produced by the Simalungun themselves. The Simalungun acknowledge the prowess of Toba weavers and as far back as our sources go, there are records of the Simalungun obtaining certain of their cloths from Toba weavers. The Toba, in contrast, are not as aware of the cloth tradition of the Simalungun Batak, nor do they covet it. All this suggests that Simalungun weaving may have been more influenced by Toba weaving than the opposite, but such hypotheses remain in the realm of conjecture. That there is historical contact between the two groups is undeniable. Equally undeniable is that both the Simalungun and Toba methods of exchanging the warps and embellishing their cloths with supplementary weft patterning are highly sophisticated.

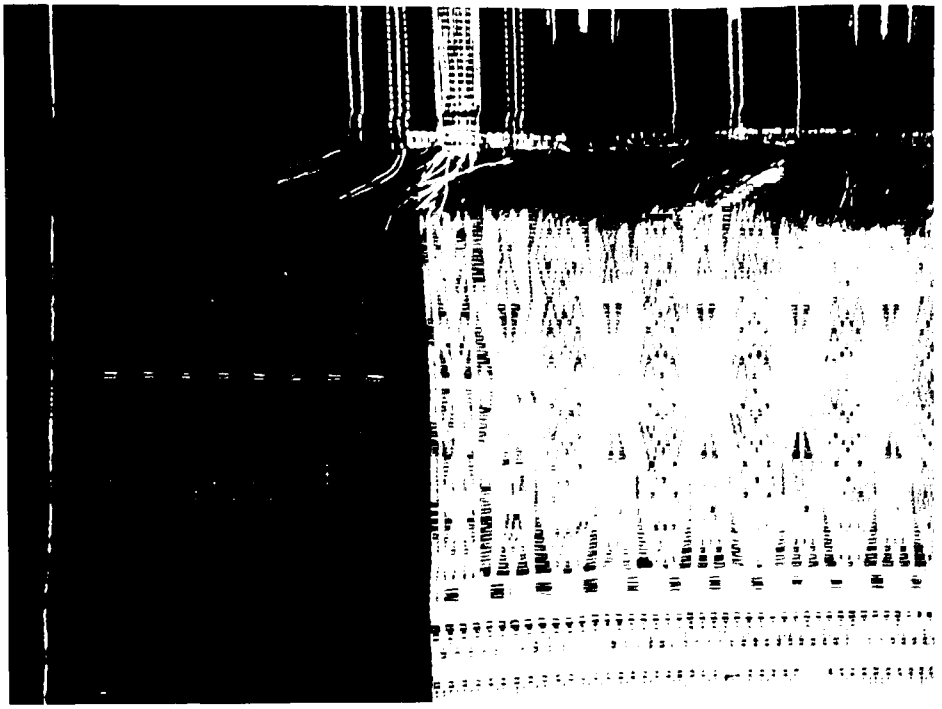


Figure 28. A detail of the ***ragidup sisabulung*** *showing that the supplementary weft patterning extends beyond the center panel into the side panels.*

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NOTES

1. The data for this article were collected during 1986 when I visited North Sumatra. I am particularly thankful to Nai Ratna in Hutagalung and her daughters, who patiently showed me all I needed to know about the *ragidup*. Nai Arta, br. Simatupang, Ny. M. Sihombing in the same village showed me her work on the *ragidup sisabulung*. Nai Ganda, br. Tobing first told me about this unusual cloth. In Simalungun, Ibu Hotlin and her sister taught me about the *bulang*, and the former introduced me to Ny. Silalahi, br. Purba, Mamak Si Dirita in the village Naga Panei, when she was substituting her warp.

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A very special thanks is due Linda Turner of the Department of Clothing and Textiles at the University of Alberta for patiently producing all the drawings that appear in this article, as well as Figs. 1, 5, 7, and 28. Mary Frame graciously commented on a version of the text and I am grateful for her insights and suggestions. Responsibility for the text remains mine, however.

2. The Simalungun *bulang* is worn differently depending on whether the wearer is going about her daily tasks or going to a ritual event, and depending upon whether she is old or young. It is worn differently yet again by a bride. (Purba, n.d. :42)

BIBLIOGRAPHY

Barbier, Jean Paul. 1983. *Tobaland: The Shreds of Tradition*. Geneva: Musee Barbier-Muller.

Bird, Junius. 1960. "Suggestions for Recording of Data on Spinning and Weaving and the Collecting of Material." *Kroeber Anthropological Society Papers* 22: 1-9. Berkeley.

Burnham, Dorothy. 1980. *Warp and Weft: A Textile Terminology*. Toronto: Royal Ontario Museum.

Gittinger, Mattiebelle. 1975. "Selected Batak Textiles: Technique and Function." *The Textile Museum Journal* 4/2:13-29.

Jasper, J. E. and Mas Pirngadie. 1912. *De Inlandsche Kunstnijverheid in Nederlandsch Indie*. Vol. 2. *De Weefkunst*. The Hague: Mouton.

Niessen, Sandra. 1984. "Textiles are Female ... but what is Femaleness? Toba Batak Textiles in the Indonesian Field of Ethnological Study." In *Unity in Diversity: Indonesia as a Field of Anthropological Study*, edited by P. E. de Josselin de Jong. Verhandelingen Series of the KITLV, no. 103. Dordrecht-Holland; Cinnaminson, N.J.: Foris Publications.

———. 1985. *Motifs of Life in Toba Batak Texts and Textiles*. Verhandelingen of the KITLV, no. 110. Dordrecht-Holland; Cinnaminson, N.J.: Foris Publications.

Purba, M. D. n.d. *Adat Perkawinan Simalungun*. Medan, Sumatra: Penerbit M. D. Purba.

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